

8.0 IDENTIFICATION OF REMOVAL ACTION SCOPE, GOALS AND OBJECTIVES

The primary objective of the remediation of the Morning Star Mine site is to protect human health and the environment in accordance with state and federal statutes and regulations. Specifically, the selected remedial alternative must limit human and ecological exposures of the identified mine-related contaminants and reduce the mobility of those contaminants through associated groundwater and surface water pathways. Currently, the scope of the remedial action has been limited to the features of the mine site that pose the most significant risk to human and ecological exposures; the two heap leach pads and the pregnant solution pond. The goal of the identified preferred alternative will be to provide effective protection to human health and the environment within the limitations caused by the remoteness of the site, the existing site conditions, and the regulatory framework of the management agency. The objective of the remediation will be the design of systems that can be put in place to permanently reduce the site's risk to human and ecological exposures.

8.1 Evaluate Statutory Limits

The state of California and the Lahontan Regional Water Quality Control Board have established discharge limits for Total and WAD cyanide in discharge waters (3.1). The state of California has established Total Threshold Limit Concentrations for the presence of certain metals in soils (Table 3.2), and Maximum Contaminant Levels for drinking water. While the uncontrolled release of solution waters *per se* is a regulatory concern, it is the presence of both Total and WAD cyanide in the process solution at the site that cause the most concern regarding risks to human health and the environment.

8.2 Determine Scope of Removal Action

The scope of the action evaluated by this document focuses on containment of process solution from two heap leach pads and the lined pregnant solution pond. As implementing the Interim Measure minimizes the risk of accidental and catastrophic release to the environment, the

alternative actions evaluated (with the exception of the No Action Alternative) provide site cleanup and stabilization.

8.3 Determine Schedule of Removal Action

The NPS requested that an interim measure (Fig. 4) be designed and implemented to stop the release of mine waste and associated solutions from both heap leach pads and the lined pregnant solution pond (PSP) pending construction of the Preferred Alternative. The Interim Measures are intended to be a short-term response until a final action is implemented. During late May and early June 2002, controls were installed and operation of a re-circulation system began to stop overflows from Pad 2 and minimize leakage from the pad and PSP. In mid-July 2002, the system was expanded and “fine-tuned” in order to take advantage of the maximum evaporative summer months. Site visits following construction and installation of the controls will be once per week for the first month to monitor and adjust flows as necessary, then once per month after that for the first year. Site visits can be scheduled according to weather events that may affect the system and according to the construction schedule of the final remedy.